# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11611479

| | | | |
|---|---|---|---|
| Frame | : 213/5T | Cooling method | : IC411 - TEFC |
| Insulation class | : F | Mounting | : F-1 |
| Duty cycle | : Cont.(S1) | Rotation¹ | : Both (CW and CCW) |
| Ambient temperature | : -20°C to +40°C | Starting method | : Direct On Line |
| Altitude | : 1000 m.a.s.l. | Approx. weight³ | : 80.5 kg |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0636 kgm² |
| Design | : B | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Output [HP] | 10 | 7.5 | 7.5 | 7.5 | 10 | 10 | 10 |
| Poles | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 380 | 400 | 415 |
| Rated current [A] | 25.3/12.7 | 11.5 | 11.4 | 11.3 | 15.2 | 14.4 | 14.1 |
| L. R. Amperes [A] | 162/81.1 | 86.2 | 91.5 | 96.1 | 90.9 | 93.6 | 98.8 |
| LRC [A] | 6.4x(Code H) | 7.5x(Code J) | 8.0x(Code K) | 8.5x(Code L) | 6.0x(Code G) | 6.5x(Code H) | 7.0x(Code H) |
| No load current [A] | 11.3/5.65 | 5.60 | 6.00 | 6.35 | 5.60 | 6.00 | 6.35 |
| Rated speed [RPM] | 1765 | 1470 | 1475 | 1475 | 1450 | 1455 | 1465 |
| Slip [%] | 1.94 | 2.00 | 1.67 | 1.67 | 3.33 | 3.00 | 2.33 |
| Rated torque [kgfm] | 4.11 | 3.70 | 3.69 | 3.69 | 5.01 | 4.99 | 4.95 |
| Locked rotor torque [%] | 240 | 240 | 270 | 300 | 180 | 200 | 220 |
| Breakdown torque [%] | 295 | 300 | 340 | 360 | 220 | 250 | 270 |
| Service factor | 1.25 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 30s (cold) 17s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) |
| Noise level² | 58.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) |
| Efficiency (%) 25% | | | | | | | |
| Efficiency (%) 50% | 91.0 | 90.0 | 89.2 | 88.7 | 90.3 | 90.3 | 90.3 |
| Efficiency (%) 75% | 91.7 | 90.0 | 89.9 | 89.8 | 90.2 | 90.2 | 90.2 |
| Efficiency (%) 100% | 91.7 | 89.8 | 90.1 | 90.3 | 88.5 | 89.5 | 90.2 |
| Power Factor 25% | | | | | | | |
| Power Factor 50% | 0.65 | 0.61 | 0.57 | 0.53 | 0.72 | 0.68 | 0.64 |
| Power Factor 75% | 0.76 | 0.74 | 0.70 | 0.67 | 0.81 | 0.79 | 0.76 |
| Power Factor 100% | 0.81 | 0.81 | 0.77 | 0.75 | 0.85 | 0.84 | 0.82 |

Losses at normative operating points (speed;torque), in percentage of rated output power

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Losses (%) | P1 (0,9;1,0) | 8.8 | 11.0 | 10.7 | 10.4 | 12.6 | 11.4 | 10.6 |
| | P2 (0,5;1,0) | 7.3 | 9.2 | 8.9 | 8.7 | 10.5 | 9.5 | 8.8 |
| | P3 (0,25;1,0) | 7.0 | 8.8 | 8.5 | 8.3 | 10.0 | 9.1 | 8.4 |
| | P4 (0,9;0,5) | 4.6 | 5.8 | 5.6 | 5.5 | 6.6 | 6.0 | 5.6 |
| | P5 (0,5;0,5) | 3.2 | 4.0 | 3.9 | 3.8 | 4.6 | 4.1 | 3.8 |
| | P6 (0,5;0,25) | 2.3 | 2.8 | 2.7 | 2.7 | 3.2 | 2.9 | 2.7 |
| | P7 (0,25;0,25) | 1.6 | 2.0 | 1.9 | 1.8 | 2.2 | 2.0 | 1.9 |

| | | Drive end | Non drive end |
|---|---|---|---|
| Bearing type | : | 6308 ZZ | 6207 ZZ |
| Sealing | : | V'Ring | V'Ring |
| Lubrication interval | : | - | - |
| Lubricant amount | : | - | - |
| Lubricant type | : | Mobil Polyrex EM | |

Foundation loads

Max. traction : 207 kgf

Max. compression : 288 kgf

This revision replaces and cancel the previous one, which must be eliminated.

(1) Looking the motor from the shaft end.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

| Rev. | Changes Summary | Performed | Checked | Date |
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Customer :

Notes
USABLE @208V 27.4A SF 1.15 SFA 31.5A

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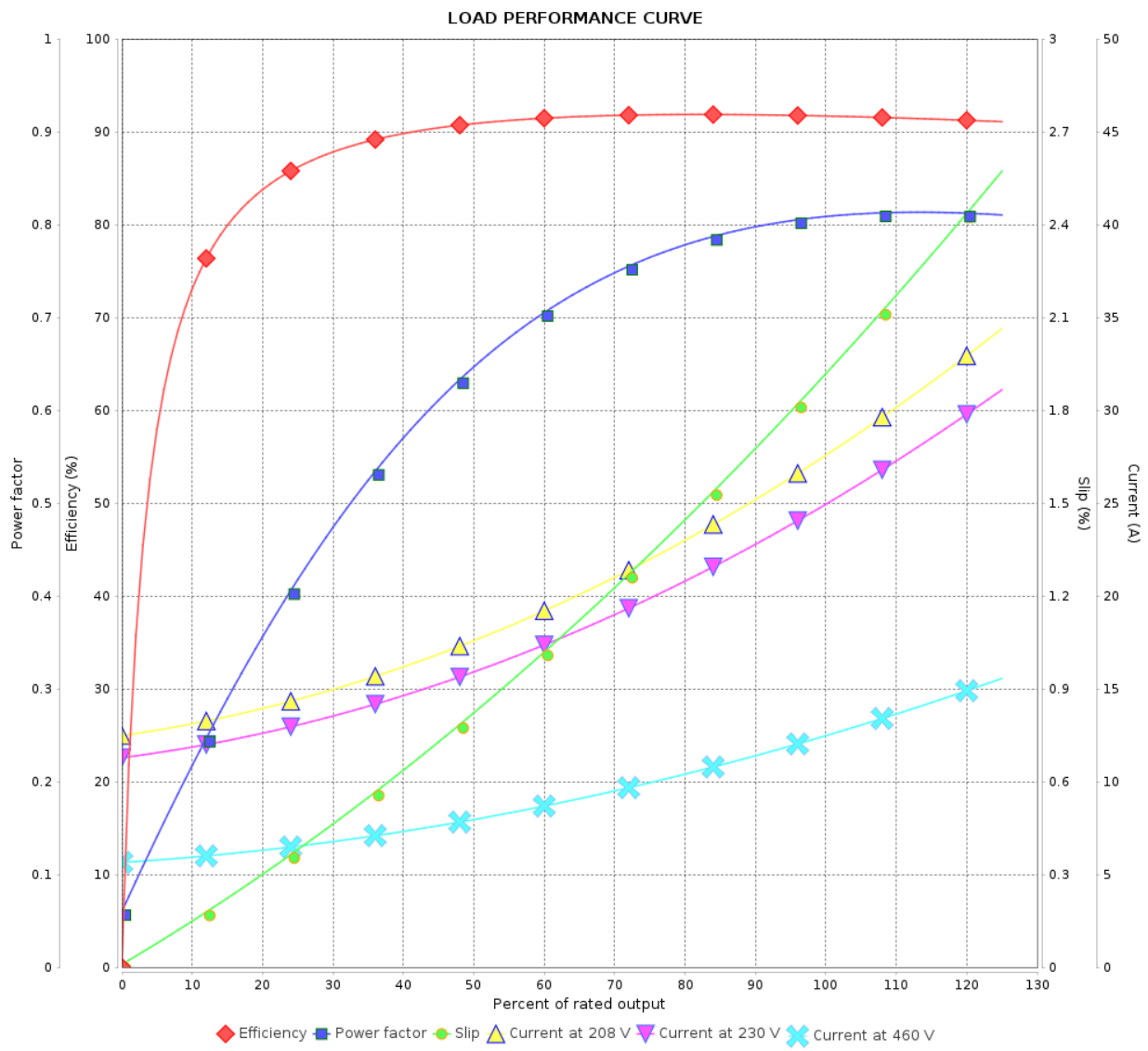
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11611479




| | | | |
|---|---|---|---|
| Performance | : 230/460 V 60 Hz 4P | | |
| Rated current | : 25.3/12.7 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 4.11 kgfm | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.25 |
| Breakdown torque | : 295 % | Temperature rise | : 80 K |
| Rated speed | : 1765 rpm | Design | : B |

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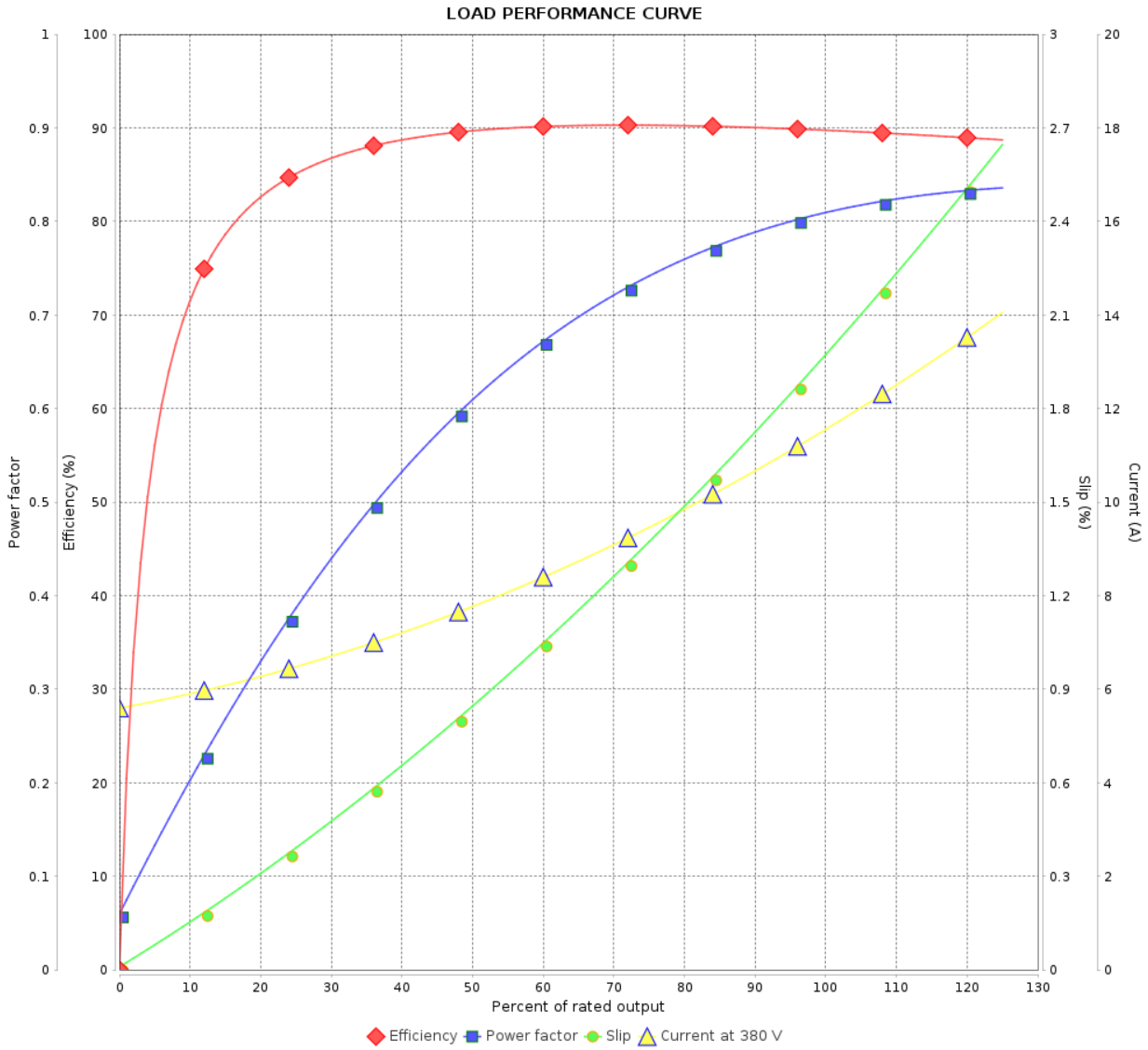


| | | | |
|---|---|---|---|
| Performance | : 380 V 50 Hz 4P IE3 | | |
| Rated current | : 11.5 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 7.5 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.70 kgfm | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.15 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1470 rpm | Design | : B |

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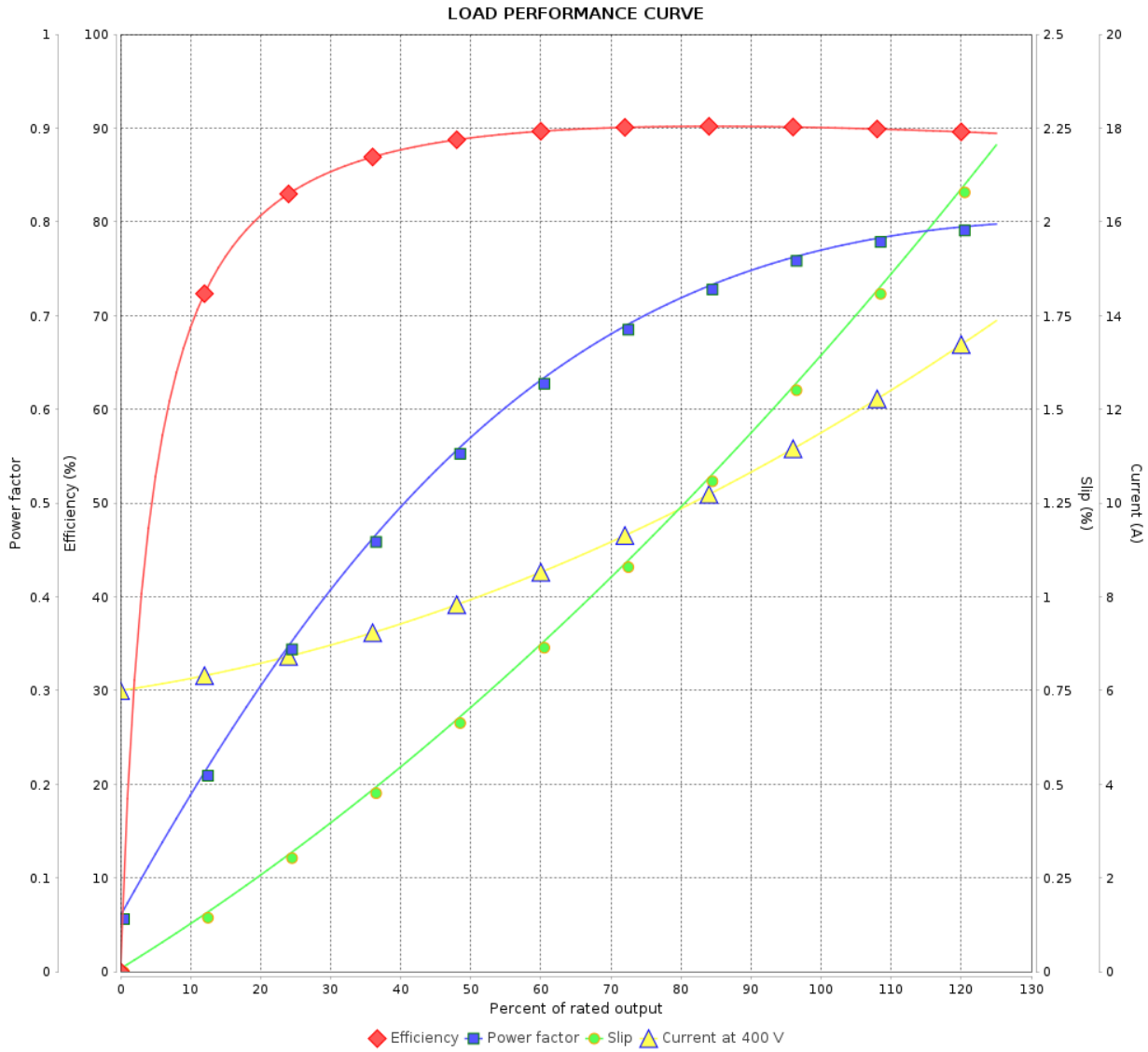


| | |
|---|---|
| Performance | : 400 V 50 Hz 4P IE3 |

| | | | |
|---|---|---|---|
| Rated current | : 11.4 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 8.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.69 kgfm | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.15 |
| Breakdown torque | : 340 % | Temperature rise | : 80 K |
| Rated speed | : 1475 rpm | Design | : B |

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

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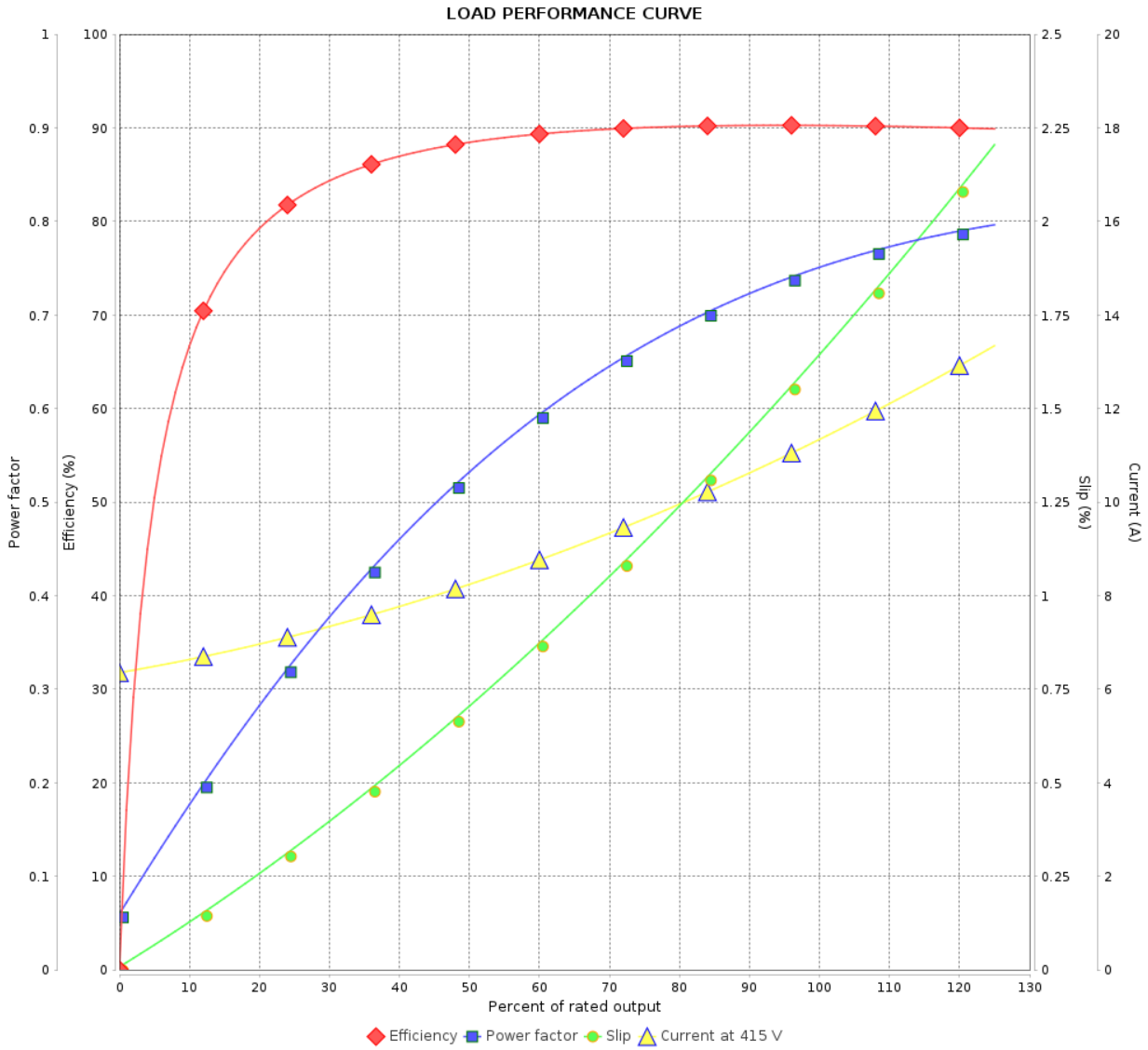
Product code : 11611479




| | | | |
|---|---|---|---|
| Performance | : 415 V 50 Hz 4P IE3 | | |
| Rated current | : 11.3 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 8.5 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.69 kgfm | Insulation class | : F |
| Locked rotor torque | : 300 % | Service factor | : 1.15 |
| Breakdown torque | : 360 % | Temperature rise | : 80 K |
| Rated speed | : 1475 rpm | Design | : B |

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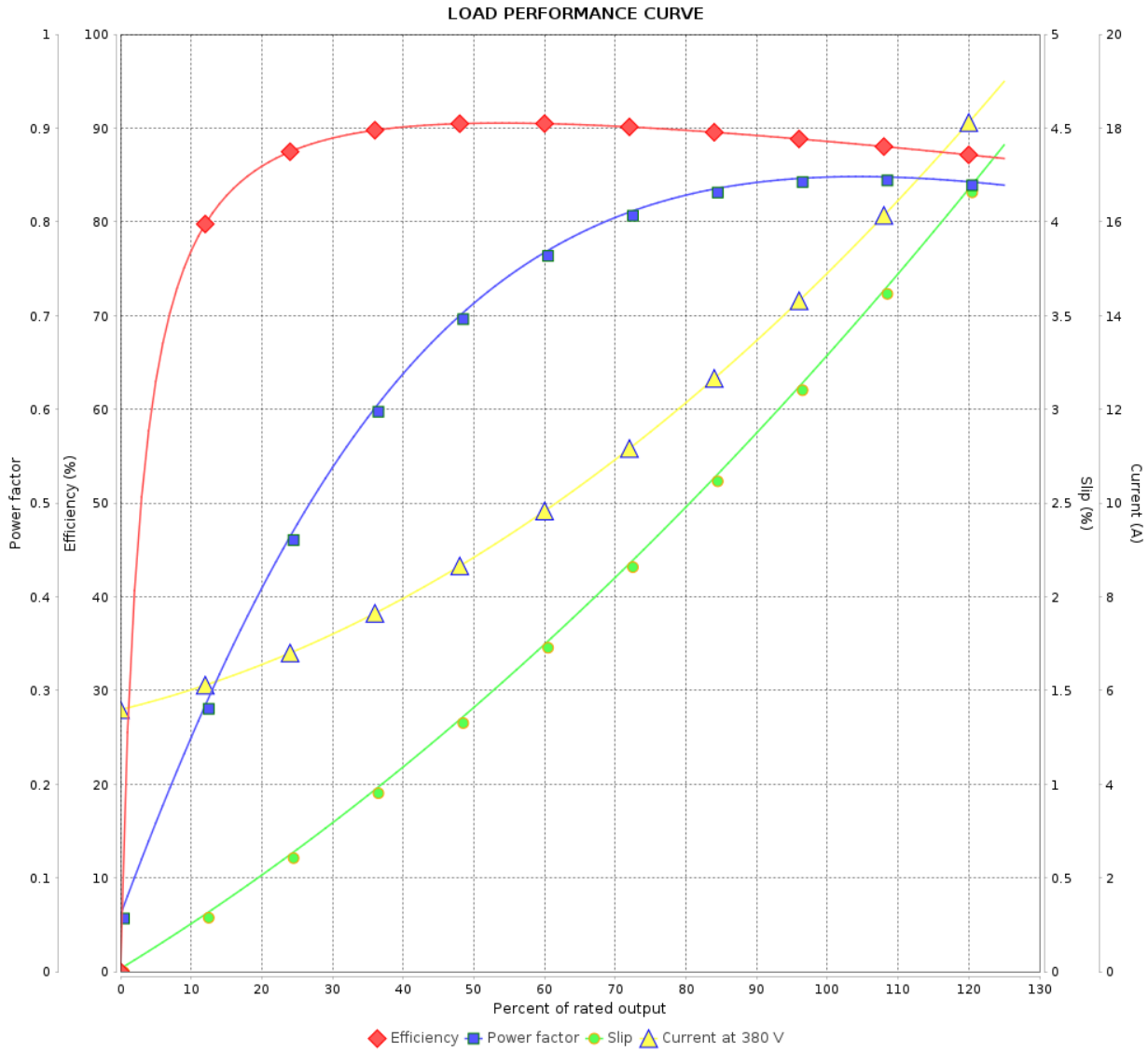


| | | | |
|---|---|---|---|
| Performance | : 380 V 50 Hz 4P IE1 | | |
| Rated current | : 15.2 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 6.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 5.01 kgfm | Insulation class | : F |
| Locked rotor torque | : 180 % | Service factor | : 1.15 |
| Breakdown torque | : 220 % | Temperature rise | : 80 K |
| Rated speed | : 1450 rpm | Design | : B |

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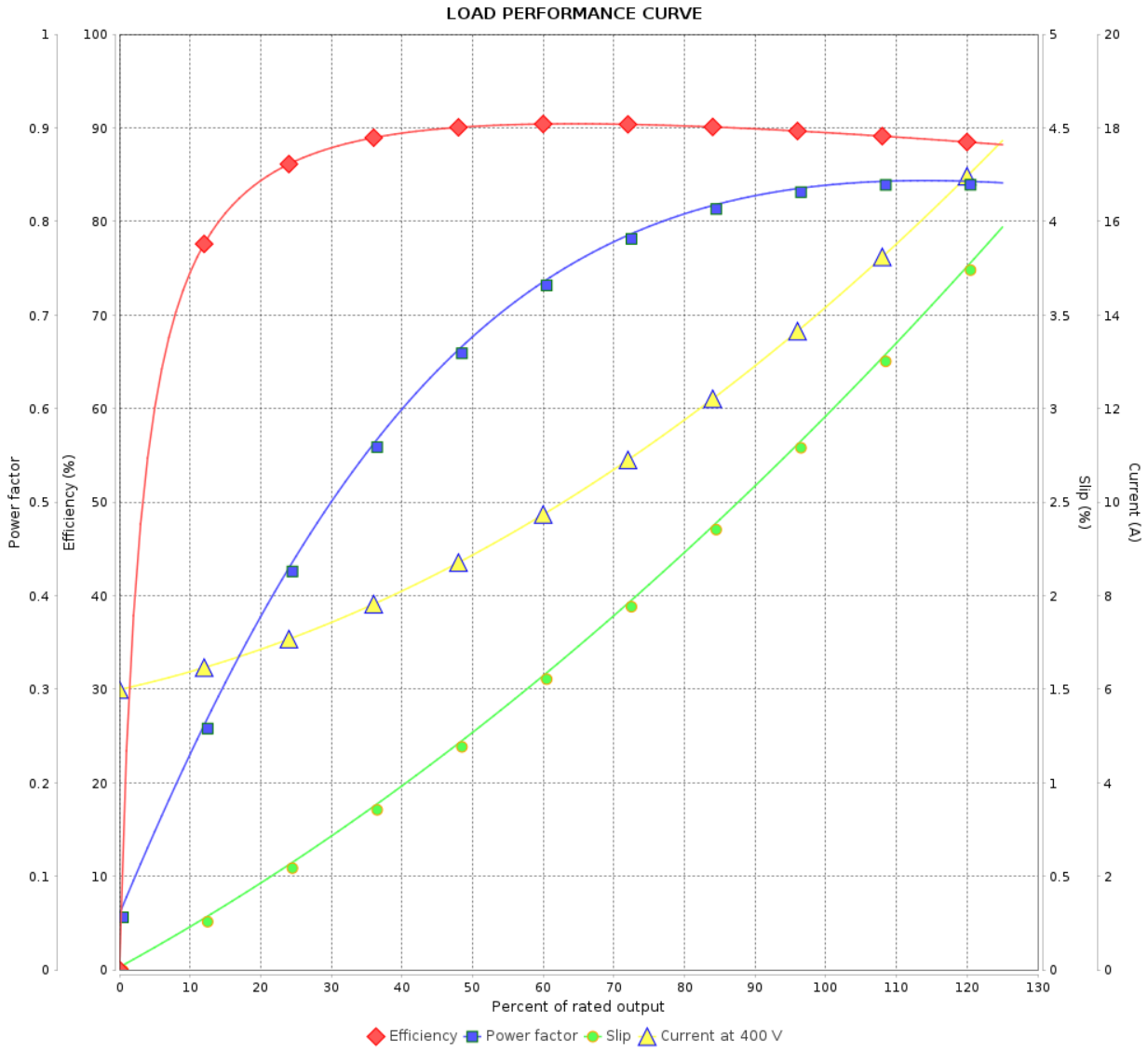


| | | | |
|---|---|---|---|
| Performance | : 400 V 50 Hz 4P IE2 | | |
| Rated current | : 14.4 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 6.5 | Duty cycle | : Cont.(S1) |
| Rated torque | : 4.99 kgfm | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.15 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 1455 rpm | Design | : B |

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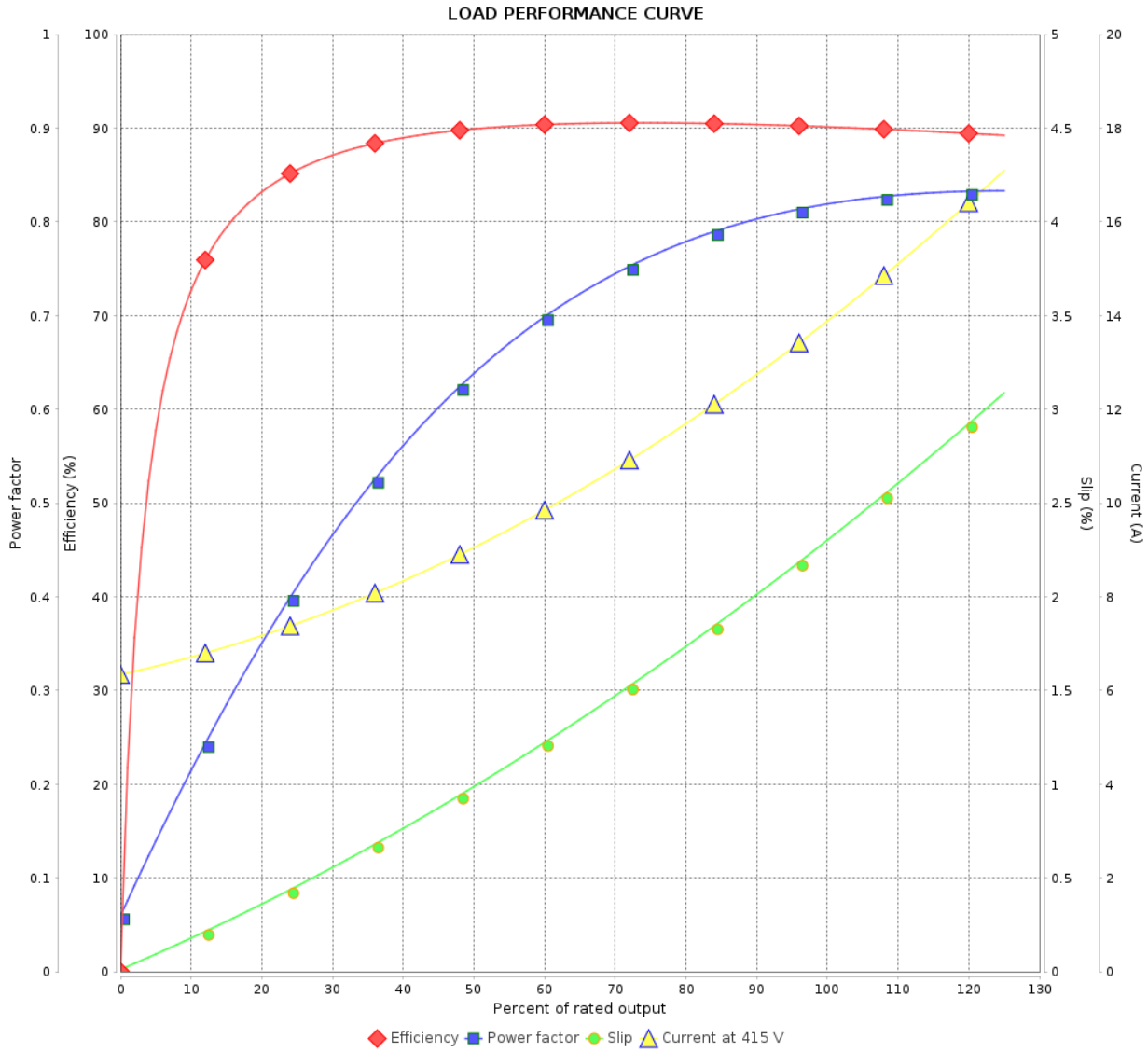


| | |
|---|---|
| Performance | : 415 V 50 Hz 4P IE2 |

| | | | |
|---|---|---|---|
| Rated current | : 14.1 A | Moment of inertia (J) | : 0.0636 kgm² |
| LRC | : 7.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 4.95 kgfm | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : 1.15 |
| Breakdown torque | : 270 % | Temperature rise | : 80 K |
| Rated speed | : 1465 rpm | Design | : B |

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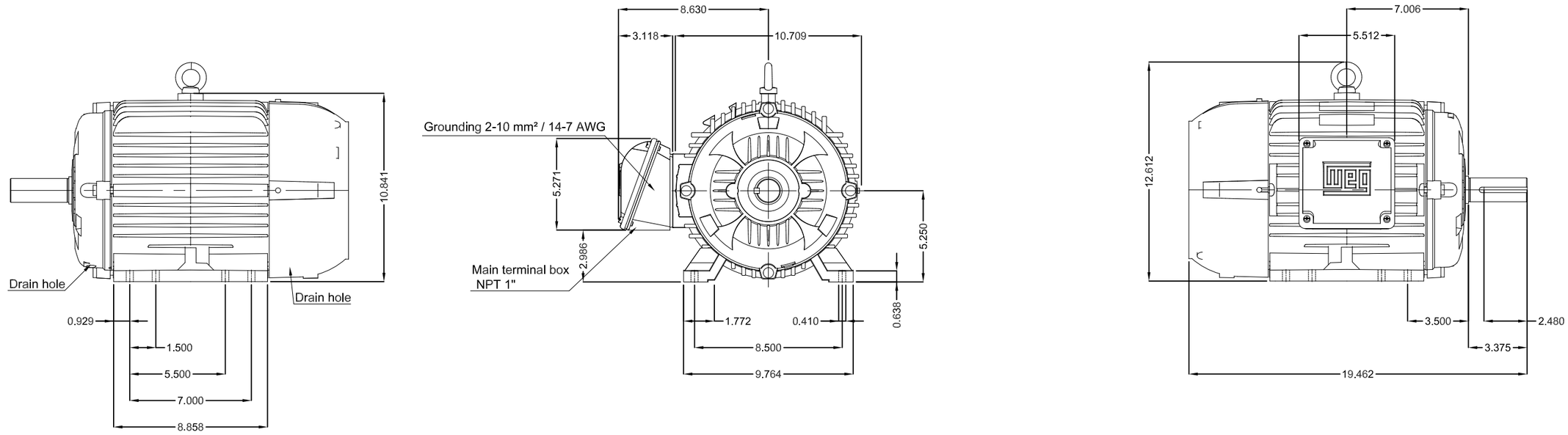
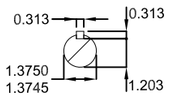



DE Shaft End




Color RAL 5009

Painting plan 207A

Mounting B3R(D)

10 HP 04 Poles 60 Hz | A

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|---|---|---|---|---|---|---|---|
| | | | HYBRISUSER | | | | 00 |

| | |
|---|---|
| EXECUTED | HYBRISUSER |
| CHECKED | |
| RELEASED | |
| REL. DATE | |

THREE PH. MOTOR W22 NEMA PREM. EFF.
FRAME 213/5T IP55 TEFC

PREVIEW

WDD 00

SHEET /

Dimensions in inches

A3

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